SCHOOL-WORK TRANSITIONS PROJECT

Report 97-1

1996 Alberta High School Graduate Survey
Report of Research Findings

Prepared for
Alberta Education
and
Alberta Advanced Education and Career Development

by

Graham S. Lowe, Harvey Krahn
(Co-Principal Investigators)
and
Jeff Bowlby (Project Manager)

Population Research Laboratory
Department of Sociology
University of Alberta

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Acknowledgments

Funding for this study was provided to the Co-Principal Investigators, H. Krahn and G.S. Lowe, by Alberta Education, Alberta Advanced Education and Career Development, and the Social Sciences and Humanities Research Council of Canada (Grant no. 410-96-0804).

We would like to acknowledge the research assistance of Karen Robson throughout this study, and the data collection assistance of numerous graduate students in the Sociology Departments at the University of Alberta and the University of Calgary. Members of the Tracking Studies Review Group, a research advisory committee in Alberta Education (Mike Alpern, John Blevins, John Burger, Pat Ehman) and Alberta Advanced Education and Career Development (Peter Hill, Bob Nicoll, Gina Wong), contributed valuable advice at all stages of the research process. Their comments on the research design, the questionnaire and a draft of this report were especially helpful. The staff of the Population Research Laboratory provided excellent data processing services.

We are grateful to the school administrators and teachers across the province who accommodated our requests for access to grade 12 students at a very busy time in the school year. And the 2681 students who completed our questionnaires were, ultimately, the ones who ensured the success of the entire research project. Their cooperation is especially appreciated.

Executive Summary

- This study of 1996 Alberta grade 12 students examines their educational achievements, further education plans, perceptions of the relevance of their high school education, career goals, paid and volunteer work experience, and acquisition of work-relevant skills.

Research Methods

- A modified probability sampling strategy was employed to ensure that the final sample would provide reliable province-wide estimates. A total of 58 schools participated in the study.

- The questionnaire was self-administered within classrooms where 2681students completed useable questionnaires.

- Sample results are weighted to match the proportion of all Alberta grade 12 students in the different geographic regions of the province and school districts within them.

Socio-demographic and Personal Characteristics

- 49% of respondents were female. Respondents' average age was 17.6 years.

- 88% of sample members were born in Canada. 69% had always lived in Alberta, while 31% were born in another province or country; in Edmonton and Calgary, this figure was 39%.

- 17% identified themselves as members of a visible minority group; this figure was higher in Edmonton and Calgary (28%).

- 76% of respondents were living with both parents, 18% with one parent, and 6% were living alone or with others.

- 23% of respondents' mothers and 27% of their fathers had a university degree; more than half of both parents had some post-secondary education.

- Large majorities of these grade 12 students say they are happy, hopeful and healthy, and have positive self-esteem.

- However, respondents' lives seem to be fairly stressful: less than one-third reported that they have little or no stress.

Educational Status, Achievement, Preferences and Plans

- 73% of these 1996 grade 12 students were in academic programs.
- 51% of all students had grades in the 65-79% range, 27% had grades lower than 64%, and 22% had grades greater than 80%.
- 23% had participated in work-experience programs of various kinds in the past year.
- 93% of all sample members agreed that people today require higher levels of education than they did in the past; 86% agreed that continuing their education would get them a good job; but only 49% felt that they would have to go back to school more than once in their lifetime.
- 64% of respondents believe that post-secondary education is getting too expensive.
- 43% of respondents preferred a university education versus 24 % who preferred a trades or technical education; 61% were encouraged by their parents to get a university education, while only three in ten were encouraged to get a trades or technical education.
- 16% of the total sample planned to return to high school in the fall, 21% were not continuing their education in the immediate future, and 63% were planning to enter a post-secondary program in the fall. Among these students going on to post-secondary education, 46% planned to enroll at a university, 30% at a community college, and 15% at a technical institute; 4% planned to enter an apprenticeship, and 5% had other post-secondary plans.
- The most frequently cited reasons by respondents for continuing their education concerned jobs or careers. Among those students not planning to continue their education, financial reasons were most important.

Evaluating High School Education

- 74% of sample members felt that their communication skills and reasoning skills had improved in high school, 67% felt their ability to work with others in groups had improved, and 47% felt that their ability to use a computer had improved.
- However, only 46% felt that their education had provided skills needed for the workplace. This suggests that some students have a limited view of work requirements, or do not perceive the relevance of high school education for careers.

Work Experience and Plans

- 72% of these grade 12 students indicated they had held a job during the previous school year, in which they worked on average 17.4 hours a week, earning approximately $113.00 per week.

- 26% had worked ten or fewer hours per week, 47% had worked between 11 and 20 hours, and 27% had worked more than 20 hours per week.

- The majority (72%) of those students employed at the time of the survey were in unskilled or semi-skilled sales and service jobs.

- 44% of respondents had participated in volunteer work during the past school year.

- Regarding occupational aspirations, sample members listed professional occupations more frequently than sales and service, clerical, and blue-collar occupations.

- There were clear gender differences in career preferences: "nurse," "social worker" and "teacher" were predominantly chosen by females; "computer analyst/ programmer," "engineer" and "auto mechanic" were mainly chosen by males.

- Respondents place highest value on work that is interesting, involves friendly people, has little chance of being laid off, and provides a feeling of accomplishment.

- 74% indicated that everyone has the right to the kind of job for which their education has prepared them; 64% indicated that if someone has worked hard in school, they are entitled to a good job.

- 65% of respondents agreed that it would be harder for people in their generation to live as comfortably as previous generations.

- 47% of respondents indicated they would move out of the country to take a job.

Acquisition of Employability Skills in School and Work

- The study measured the self-reported acquisition of job-related skills by grade 12 students from 4 sources: high school courses, work experience programs, current jobs, and current volunteer work.

- Respondents reported acquiring the following kinds of job-relevant skills and knowledge: people skills (such as social and interpersonal skills, helping others, team work, etc.); work attitudes and behaviour (such as personal development, discipline,

hard work, etc.); basic academic skills (notably speaking, numeracy, writing and reading); and specific technical and computer skills.

- High school courses, compared to the other 3 sources, are the most likely site for the development of analytic and basic academic skills, even though few students see these skills as relevant to the workplace.

- People skills are more likely to be acquired in paid jobs or in volunteer work. Business skills (both general ones and specific skills such as handling cash or accounting skills) are mainly developed in jobs and in work experience programs.

- 91% of respondents said they were able to use a computer for more than just playing games. Approximately six in ten respondents had used a computer for word processing in the 12 months prior to the survey, either at school or home. Yet only 6% had done word processing in their paid jobs.

- When asked about the job-relevant skills which high school had *not* provided them, respondents emphasized specific job preparation (e.g., knowledge of what workplaces are like, job search skills, and practical experience) and specific technical skills.

- Yet in response to a question asking respondents their views on what employers look for when hiring high school graduates, respondents tended to emphasize positive work attitudes and appropriate work behaviours, rather than specific job skills.

Conclusions

- This study has begun to illuminate the complex linkages between secondary and post-secondary education, and between education and employment, as experienced by high school seniors. It raises a central policy question: What are the key supports and barriers to students achieving their educational and career goals?

- Demographic and socio-economic characteristics have a major impact on educational attainment and plans, and on career expectations. Students from higher socio-economic status families are more likely to be in an academic high school program, have better grades, plan to attend university, and have higher career aspirations.

- Consistent with previous research, female students have higher academic achievement than their male counterparts, and are equally likely to plan to continue their education. Yet young women still tend to prefer traditional female careers while many male students are also quite traditional in their aspirations.

- Attitudes can also facilitate or inhibit the achievement of goals, and in this regard a key finding is that grade 12 students strongly value higher education. In addition, priority is given to university as the post-secondary destination of choice, rather than community colleges or trades and technical institutes.

- Other more specific attitudes identify potential barriers; e.g., only half of grade 12 students expect to return to school more than once in their life, which seems inconsistent with the current emphasis on "life-long learning". Surprisingly few respondents expect to change jobs many times in their careers, another reputed hallmark of the "new economy".

- Respondents also perceived cost to be a potential barrier to achieving educational goals. While two-thirds of grade 12 students believe that post-secondary education is getting too expensive, cost obviously will be a larger barrier to students with lower socio-economic status.

- From the perspective of students, they have acquired a variety of job skills in high school courses, work experience programs, paid jobs, and volunteer work. It is important to recognize these diverse sources of employability skills, and the different kinds of skills that can be acquired in each.

- Given the consensus that such broad academic skills are essential in today's workplace, it is striking just how little emphasis grade 12 students place on core academic skills and knowledge when asked to assess the job-relevance of their education. Despite having acquired general employability skills, students tend to work in jobs that underutilize these skills.

1. Introduction

The 1990s have witnessed the acceleration of economic and labour market trends that were already affecting school-work transitions in the 1980s. Young people are confronting new uncertainties and risks as they move in and out of school and employment, and into adult roles. As part of our on-going research on changing school-work transitions, this study of 1996 Alberta high school graduates asks how young people make personal choices about education and careers within the parameters of rapidly changing social and economic institutions. Specifically, we are interested in how labour market transformation and uncertainty is reflected in grade 12 students' work and education values, their assessment of their high school education, their immediate plans for further education and for employment, and their longer-term aspirations.[1] More generally, we hope to discover to what extent these aspects of school-work transitions have changed over the past decade.

This large research agenda is refined to a manageable set of policy-relevant issues for the purposes of this report on the 1996 Alberta High School Graduate Survey. Specifically, the report examines grade 12 students' educational achievements, further education plans, perceptions of the relevance of their high school education, career goals, paid and volunteer work experience, and acquisition of work-relevant skills. Section 2 reviews the methodology used in the study and describes the sample. Section 3 provides a detailed socio-demographic profile of survey respondents. The educational activities of respondents during their grade 12 year, their plans and expectations, and their education-related attitudes are examined in Section 4. Section 5 focuses on the acquisition of work-relevant skills and knowledge in high school. Respondents' work experiences, both paid and voluntary, are described in Section 6. Section 7 documents in some detail the specific job-related skills and knowledge acquired in high school courses, work-experience

[1] While in general terms, this research focuses on grade 12 graduates, given that survey results reported below reveal that not all of these students intend or had sufficient credits to graduate, we refer to sample members as "grade 12 students".

programs, part-time jobs, and volunteer work. Section 8 draws out some of the implications for educational policy, highlighting key factors that act as supports and barriers to students achieving their goals.

2. Research Methods and Sample Description

The School-Work Transitions Project

The School-Work Transitions Project, a set of longitudinal panel surveys of Alberta high school and university graduates, addresses a wide range of questions about changing patterns of school-work transition. The first surveys, completed in 1985, collected baseline information about educational and employment experiences and plans from approximately 1000 high school seniors in six Edmonton high schools and about 600 graduates of the University of Alberta. Follow-up surveys focusing on the further educational activity, employment outcomes, and transitions to adult roles of these young people were conducted in 1986, 1987, 1989, and 1992.[2] An additional follow-up survey, planned for 1997, will focus on the long-term education and employment experiences of the high school and university graduating classes of 1985.

Longitudinal studies such as this provide valuable information on the individual process of transition from school to work, from work back to school, and from youth into adulthood. Thus, our panel study of the "class of 1985" can reveal how members of this cohort changed over time, perhaps as a result of labour market difficulties or movement into new adult roles such as parenthood. However, one would need to compare successive cohorts to determine, for example, whether today's graduates have different career plans and outcomes, compared to the "class of 1985."

The 1996 Alberta High School Graduate Survey (and a parallel survey of 1996 University of Alberta graduates, which we will report on separately) was designed to collect baseline data on the educational and employment experiences of the "class of 1996." Future follow-up surveys will track these graduates and provide longitudinal data

[2] Similar surveys of high school and university graduates were also completed in Toronto and Sudbury. Follow-up surveys of respondents in these two cities were conducted in 1986, 1987, and 1989.

on the school-work transitions of the current cohort of graduates for comparison with the findings from the set of linked surveys beginning in 1985.

The 1996 Alberta High School Graduate Survey was initially designed to replicate the baseline (1985) Edmonton high school survey, sampling a similar number of graduates in the same six schools. After consultation with two of the three funding agencies (Alberta Education and Alberta Advanced Education and Career Development) we decided to broaden the sample to include graduates from across the province. Thus, data from high schools in Edmonton can address questions about cohort changes (i.e., comparing the "class of 1985" with the "class of 1996"). But our main focus in this report is the background, experiences, ambitions, values, and work-related skills of the province-wide "class of 1996."

Research Questions

The research questions guiding the baseline 1996 Alberta High School Graduate Survey are of two basic types. The first type focuses on the "class of 1996" while the second addresses possible differences between today's graduates and the graduates of a decade earlier. Our interest in this report is directed toward the former type of questions, and include the following:

* What are the demographic and socio-economic profiles of Alberta grade 12 students, and how would they characterize their own personal well-being?

* How do these students evaluate their educational experiences?

* How much work experience (part-time jobs as well as "work experience" programs within the school curriculum) have grade 12 students acquired?

* How much volunteer work experience do they have? What kinds of paid and unpaid work have they been doing?

* What kinds of labour market skills do young people think they have acquired in school, in volunteer work, and in paid employment? What kind of skills do young people think employers are looking for?

* What are the educational goals, education and work values, and career aspirations of today's grade 12 students?

* Do the school and work experiences, values, and ambitions of Alberta grade 12 students differ on the basis of gender, family background, urban-rural residence, and other background characteristics?

Questionnaire Design

The questionnaire for the 1996 Alberta High School Graduate Survey was designed to be self-administered within classrooms. Approximately two-thirds of the questions replicate items included in the 1985 Edmonton high school graduates survey. The remaining questions focus on new issues (e.g., job-related skill acquisition in school and paid employment, computer literacy) that were identified as important by the Tracking Studies Review Group.

A draft questionnaire was pretested in two high schools, one in a large urban setting and the other in a smaller rural community. A total of 48 twelfth-graders participated in the pretest (one class in each school). In-class observations by the research team and analysis of pretest responses resulted in few modifications to the questionnaire. Because of the minor nature of these changes, we added the results from the 48 pretest subjects to the final data set.

The final questionnaire contains a limited number of questions about respondents' socio-demographic characteristics. A larger number of items have an educational focus, including questions about educational attainment (e.g., high school program, self-reported grades), assessments of the high school experience, post-secondary preferences, educational values, and educational goals. Employment-related questions about paid work experience, volunteer work, work values, occupational aspirations, and acquired

employment skills form an equally large part of the questionnaire. In addition, self-esteem and social support, self-reported mental and physical health, leisure activities, and respondents' perceptions of social issues are also measured.

A copy of the questionnaire appears in Appendix 1.[3]

Ethical Considerations

The research design and questionnaire for this study were developed with careful attention to ethical considerations. A University of Alberta Research Ethics Committee examined the content of the questionnaire and the planned data collection strategy before the study began. The Committee agreed with the research team's assessment that the questions to be asked were not intrusive nor overly-sensitive, and that the potential value of the study out-weighed any inconvenience caused to potential participants. The Committee also concurred that the research protocols ensured that informed consent from respondents would be obtained, that participation would be voluntary, and that confidentiality of responses would be maintained.

An effort was made to inform all interested parties about the goals of the study and the manner in which it would be conducted. Our first step was to select schools. In step two, school district superintendents were sent a letter describing the study, with follow-up telephone calls to obtain their permission to contact high school principals. In step three, we sent letters explaining the study to the principals of the chosen schools, with follow-up phone calls to answer questions, obtain permission, and arrange a date for the school visit. Step four involved sending the schools a package containing letters for students and their parents describing the study and parental consent forms (parents of students under age 18

[3] For more details on the research design and survey methodology, see Harvey Krahn, Graham S. Lowe and Jeff Bowlby, *1996 Alberta High School Graduate Survey: Research Design, Sampling and Data Collection*. School - Work Transitions Project Report 96-1, Population Research Laboratory, University of Alberta, July 1996.

were asked to inform the school if they did not wish their child to participate in the study).[4]

Since this study is intended to be longitudinal, it was necessary to request the names and addresses of respondents in order to allow a follow-up survey in several years' time. Thus, concerns about the confidentiality of responses are critical. The questionnaires included a tear-off sheet (see Appendix 1) on which respondents were asked for their name, address, and phone number, and for similar information about one or two other individuals who might be able to provide tracking information if the respondent were to move to a new address. Survey participants were encouraged to provide their name and address, but were reminded that this was not necessary. Respondents were also told how the research team would maintain the confidentiality of their answers (see Data Collection below).

Sampling Design

The target sample size for the 1996 Alberta High School Graduate Survey was 3000 twelfth-grade students. In order to reduce time and cost, data collection was clustered within a limited number of schools, of varying size, spread across the province. A modified probability sampling strategy (Table 1) was employed to ensure that the final sample would provide reliable province-wide estimates, while still allowing comparisons to the original 1985 survey of Edmonton high schools.

In Edmonton, our goal was to survey the same number of graduates (approximately 940) in the same five public high schools that were originally surveyed in 1985, even though this would mean that Edmonton graduates were over-sampled for the province-wide survey. Hence, for analyses of the province-wide 1996 sample, the

[4] See Appendix 2 of Krahn, Lowe and Bowlby (1996) for copies of the letters to superintendents, principals, and students/parents, parental consent form, ad other research documents and protocols.

TABLE 1
Sampling Design, Unweighted and Weighted Samples by Zone/District

Geographic Region	1994-95 Enrolment: Grade 10-12	1994-95 Enrolment: Est. Gr. 12[1]	1996 Study: Prob. Sample[2]	1996 Study: Modified Sample[3]	1996 Study: Final Sample	1996 Study: Weighted Sample[4]
Grande Prairie						
Public	4690	1876	101	101	110	111 *(1.007)*
Catholic	880	352	19	-	-	-
Other North-Central Alberta						
Public	7637	3055	165	165	222	180 *(0.812)*
Catholic	1294	518	29	48	37	51 *(1.374)*
Edmonton						
Public	17,753	7101	940	940	747	419 *(0.560)*
Catholic	6999	2800	150	150	128	165 *(1.291)*
Edmonton Rural						
Public	15,596	6238	336	336	313	368 *(1.176)*
Catholic	3384	1354	72	88	106	99 *(0.934)*
Red Deer and District						
Public	9864	3946	212	212	164	232 *(1.416)*
Catholic	809	324	16	-	-	-
Calgary						
Public	21,454	8582	461	461	417	506 *(1.213)*
Catholic	7046	2818	150	150	122	166 *(1.363)*
Calgary Rural						
Public	5534	2214	120	120	117	131 *(1.117)*
Catholic	230	92	4	-	-	-
Lethbridge						
Public	9062	3625	194	194	166	214 *(1.288)*
Catholic	1453	581	31	35	32	39 *(1.233)*
TOTAL	**113,685**	**45,476**	**3000**	**3000**	**2681**	**2681**

[1] Estimated, assuming 30% in grade 10, 30% in grade 11, and 40% in grade 12.
[2] Probability sample, in which Edmonton public schools were over-sampled (n = 940) to maintain comparability with 1985 study; sample size in other geographic regions were calculated proportional to size of estimated grade 12 class (column 2).
[3] Slight modifications to the probability sample such that small sub-samples in small Catholic school districts are replaced by slightly larger sub-samples in adjacent Catholic districts.
[4] For all regions, sample weighted to match proportions of estimated grade 12 class (column 2); weighting factors in parentheses.

Edmonton public school sub-sample is down-weighted to compensate for the initial over-sampling.

In the Edmonton Catholic school district and in the rest of the province, the desired number of respondents in each region (and in the public and Catholic school districts within each region) was determined proportional to the size of the estimated grade 12 enrollments in each (Table 1, column 2). For several small Catholic school districts, the number of respondents required was too small to warrant separate data collection efforts. In these cases, the very small sub-samples were replaced by slightly larger sub-samples in adjacent Catholic school districts (Table 1, footnote 3).

Within each geographic region, schools were then purposively sampled in order to include a representative mix of small, medium, and large-size schools in smaller and larger urban centres. A total of 51 schools were originally asked to participate in the study, and a further seven schools, including the two pretest schools, were subsequently added to the sample.[5]

Data Collection

Within the selected schools, principals (or their designated contact person) were asked to identify grade 12 classes that would provide the required number of respondents and a representative mix of students in diploma, certificate and other programs. In order to discourage schools from providing access to only their "best" students, school officials were assured that survey results would never compare individual schools.

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[5] Despite these efforts to construct a representative sample, the original sample of high schools omits private schools (frequently operated by religious organizations), outreach schools, schools located within and operated by aboriginal communities, and high schools within other institutions (e.g., correctional institutions). The decision to omit these schools from the sampling design was based on the high costs of contacting many small schools, the potentially greater difficulty in gaining access to such schools, and the recognition that such schools account for only a very small minority of Alberta high school students.

Despite concerns about using classroom time late in the school year for research purposes, principals and teachers in the selected high schools were generally very cooperative. In fact, all of the 51 schools selected in the original sample agreed to participate in the study. Yet as data collection proceeded, it became apparent that we were falling below our targeted number of students in some schools. This was especially problematic in several of the Edmonton high schools that we over-sampled, since we were asking for access to several hundred twelfth-graders in each of these schools.[6]

To compensate, five additional schools were added to the sample in June. Despite these additions to the sample, plus the fact that targets were exceeded in some small rural high schools, it was not possible to reach the total goal of 3000 completed questionnaires. When data collection ended, 2706 subjects in 58 schools had completed the questionnaire, representing 90 percent of the original target. However, since the largest portion of this sample shortfall occurred in several of the Edmonton high schools that had been deliberately over-sampled (Table 1), the somewhat smaller than anticipated final sample does not affect the precision of province-wide sample estimates.

Students in the selected classrooms received the letter describing the study, along with the parental consent form, three or four days before the date selected for data collection. Teachers were asked to read a short "script" prior to handing out this material. These procedures ensured that students, and their parents, would be informed about the study in advance of data collection.

Members of the research team (including almost a dozen graduate students along with the principal investigators and the project manager) supervised data collection in 48 of the 58 schools visited. Five schools were visited by members of the Tracking Studies Review Group. Data collection was handled by school officials in three schools, while

[6] Some of these schools chose to have the survey completed on days where class time interruptions would be minimal (e.g., graduation day, blood donor clinic day). In such situations, considerably smaller numbers of students were present when the research team arrived.

personnel from regional Alberta Advanced Education and Career Development offices visited two schools.

Data collection began on May 9 and concluded on June 21, with the bulk of the school visits taking place in the last two weeks of May and the first week of June. Smaller schools were visited by a single member of the research team who, on occasion, would meet with the complete graduating class. In larger schools, several people would visit classrooms, sometimes two or three consecutively. In several Edmonton high schools, up to nine separate classes were surveyed in an attempt to reach the target number of respondents. In total, research team members visited 139 classrooms in the 58 schools to collect the 2706 completed questionnaires.

Research team members followed a standardized set of protocols once they were in classrooms. Teachers were asked if any of the students' parents had requested that their child not participate in the study (in total, only about a dozen non-consent forms were returned). The importance of the study for individuals, schools and the education system was then explained to students. They were reminded that their participation was voluntary, but also encouraged to participate in the survey and to provide their name and address for follow-up purposes. In total, 73 percent of the participants provided follow-up information.

After completing the questionnaire, students were instructed to remove the name/address page and deposit it in a large envelope marked "confidential" along with similar pages completed by other students. Each student was also provided with an unmarked envelope in which they placed their completed questionnaire, minus the contact sheet. After all the questionnaires were completed, participating students were thanked and told that they would receive a summary of the results by mail (if they had provided their name and address). Teachers and principals were also reminded that the school would receive a short summary report containing research findings.

Data Processing and Weighting

Initial inspection of the returned questionnaires revealed that less than one percent were not useable, or had been completed by exchange students who were planning to leave the country at the end of school term. After removing these 25 questionnaires from the sample, the final number of useable responses was 2681.

A significant number of the questions included in the survey were open-ended, requesting written answers (see Appendix 1). So an important first step in data processing involved recording, verbatim, the answers to these questions from several hundred sample members. Senior members of the research team read through these answers and developed coding categories. Following a detailed training session, a team of data coders then spent several weeks assigning numeric codes to open-ended question responses. The same coders also used Statistics Canada's National Occupational Classification (NOC) system to numerically code the occupations listed in response to various questions in the survey.

We already noted that Edmonton public high schools were deliberately over-sampled. In addition, some of the desired sample sizes in other geographic regions were not obtained, for a variety of reasons. Consequently, in order to generate appropriate province-wide estimates of student characteristics, behaviours, and attitudes, the final sample was weighted to match the estimated proportions of 12th grade students in each geographic region. The weighting fractions used in this exercise are listed in the last column of Table 1.

Using Edmonton as our example, here is how the weighting works. For all of the analyses in this report, responses from the 747 sample members in Edmonton public high schools are weighted down, as if they were obtained from only 419 students. In contrast, each of the 128 students surveyed in Edmonton Catholic schools are weighted up to represent 1.29 students or, in total, 165 respondents. Thus the total weighted sample size

remains 2681, with the over-representation of Edmonton public school students corrected for initial over-sampling, as discussed above.

Sample Representativeness

With a sample size of 2681, survey estimates for the total sample are accurate within plus or minus 1.9 percent, 19 times out of 20. For male and female sub-samples, the confidence intervals would be larger (plus or minus 2.9 percent). For sub-samples in the range of 400 to 500 students, estimates would be accurate within plus or minus 4 to 5 percent, 19 times out of 20.[7]

As the discussion of sample characteristics in the next section reveals, the province-wide sample clearly appears to be representative of the population of 12th grade Alberta students with respect to gender, age, family composition, socio-economic status, visible minority and immigrant status, high school program enrollment, academic achievement, and other characteristics. However, a preliminary analysis of variations across geographic regions and school districts revealed some differences in educational achievement that appeared to be a result of our choice of particular schools and, in some cases, the selection of specific classrooms within the schools.

For example, several schools were deliberately chosen because many of their students were in the International Baccalaureate program or because many were in vocational / career and technology programs. However, it was not possible to obtain such a range of schools and classes in each region and district. Furthermore, despite requests to school officials to provide a representative mix of students, in several schools high-achievers clearly appeared to be over-represented in the final sample of student participants. These sampling quirks make comparisons across school regions and districts

[7] Since this modified probability sample did not employ random sampling techniques but, instead, relied on the judgment of the researchers to choose the schools and the judgment of schools officials to choose

inappropriate. Yet the province-wide sample does appear to be representative of the population from which it is drawn since inter-regional differences offset each other.

While inter-regional and across-district comparisons are not provided in this report, where appropriate, the findings were examined to see if community size was a relevant factor. For such cross-tabulations, four categories were compared: communities larger than 500,000 in size (i.e., Edmonton and Calgary), medium-size cities with populations under 100,000 (e.g., Red Deer, Medicine Hat, St. Albert), smaller cities and towns with less than 10,000 residents (e.g., Camrose, Drumheller), and smaller towns and villages with fewer than 2500 residents.

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the students, significance tests are, technically, not appropriate. Nevertheless, they are used in this report as a means of determining sub-sample differences large enough to deserve attention in the discussion.

3. Socio-demographic and Personal Characteristics

Respondents' socio-demographic characteristics

Within the total sample of 2681 grade 12 students, there was a relatively even distribution of males (51%) and females (49%), who were on average 17.6 years of age (Table 2). The majority of respondents were born in Canada (88%), although this proportion is lower (80%) for Calgary and Edmonton respondents. Two-thirds of the sample (69%) said they had always lived in Alberta. Of those who had moved into the province, the average length of residence in Alberta was about 10 years.

Seventeen percent of the sample identified themselves as members of a visible minority group. This figure rises to 28% in Edmonton and Calgary, reflecting the greater cultural diversity of Alberta's major urban centres. Four percent of respondents are of aboriginal descent, and two percent specified they are disabled.

More than three-quarters (76%) of all students were living with both parents at the time of data collection, although a sizable number of grade 12 students were living with one parent (18%). Very few were married (2%) or raising children (1%).

A socio-economic profile of sample members' parents is presented in Table 3. Approximately one-quarter of both mothers (23%) and fathers (27%) had a university degree. More than half of mothers (53%) and fathers (61%) had some post-secondary education. Fathers, on average, were more likely to be employed full-time (83%) than mothers (56%). However, more mothers were working in part-time jobs (21%) as compared to fathers (5%).

Parents' occupations were classified according to the four skill-level categories in the National Occupational Classification. The NOC codes reveal that respondents' fathers were more likely to be working in managerial/professional (41%) and other skilled

TABLE 2
Demographic Profile of Alberta Grade 12 Students

Female: 49%
Male: 51%

Average age: 17.6 years
50% under age 18
9% over age 18

Born in Canada: 88%
> 500,000: 80%
< 100,000: 94%
< 10,000: 97%
< 2500: 98%

Consider yourself to be ...
Visible minority: 17%
> 500,000: 28%
< 100,000: 10%
< 10,000: 3%
< 2500: 8%
Aboriginal: 4%
> 500,000: 4%
< 100,000: 5%
< 10,000: 3%
< 2500: 8%
Disabled: 2%

Currently living ....
with both parents: 76%
with one parent: 18%
alone/with others: 6%

Married/living with partner: 2%
Female: 3%
Male: 1%
Currently raising children: 1%

Always lived in Alberta: 69%
> 500,000: 61%
< 100,000: 70%
< 10,000: 78%
< 2500: 88%

If moved to Alberta, average years in Alberta: 9.5 years
Among those who moved to the province, 17% in Alberta for three years or less

Average years in present community (total sample): 12.6 years

TABLE 3
Socio-economic Profile of Alberta Grade 12 Students, their Parents, and Families[1]

Mother		*Father*
	Education	
53%	% with some post-secondary education	61%
23%	% with university degree	27%
	Occupation[2]	
33%	% managerial/professional occupations	41%
27%	% other skilled occupations	39%
32%	% semi-skilled occupations	15%
8%	% unskilled occupations	6%
	Employment Status [3]	
56%	% employed full-time	83%
21%	% employed part-time (one or more PT jobs)	5%
35%	% home-maker	3%
5%	% attending school	2%
4%	% currently unemployed	3%
17%	% unemployed at some point in past year	14%

Family		*Respondent*	
Self-reported (by respondent) Financial Situation			
Below average/ poverty level:	10%	Usually short of money:	31%
Average:	54%	Usually have enough money:	58%
Above average/ wealthy:	36%	Usually more than I need:	11%

[1] Percentages calculated with non-response omitted. Non-response rates are : mother's education 8%; father's education 12%; mother's occupation 22%; father's occupation 12%; mother's unemployment history 5%; father's unemployment history 8%; negligible non-response (under 2%) for other questions.
[2] National Occupational Classification (NOC) codes. "Other skilled" occupations require two to three years of post-secondary education or two to four years of apprenticeship, or more than two years of training in addition to secondary school. "Semi-skilled" occupations require some secondary education and up to two years of training, while "unskilled" occupations require some secondary education and a limited amount of demonstration or training.
[3] Totals add to more than 100% since sample members could answer "yes" to each of these questions.

occupations (39%), compared with mothers (33% managerial or professional, and 27% skilled). More than twice as many mothers were working in semi-skilled occupations (32%), as compared to fathers (15%). This may be related to the much higher percentage of mothers working in part-time jobs.

Subsequent analyses of family socio-economic status utilize two measures – mother's education and father's occupation – because of the lower percentage of non-response for these two variables (see footnote 1 in Table 3). Similar results (which are not reported in the Tables) were obtained when we used mother's occupation and father's education to examine the effects of socio-economic status.

At the time of the survey, unemployment levels among respondents' parents were relatively low, in the 3 - 4 percent range. However, 17 percent of respondents' mothers and 14 percent of fathers had been unemployed at some point in the past year. As well, while most respondents indicated that their family's financial situation was average (54%) or above average (36%), 10 percent considered it to be below average. Perhaps more indicative of their own consumer habits than their family's financial situation, close to one-third of respondents reported usually being short of money themselves.

Based on this socio-economic profile, it appears that respondents in this study come from slightly above average socio-economic backgrounds, at least based on their parents' education, occupation, and rates of labour force participation and unemployment. However, this would be expected, given that the parents of grade 12 students would tend to be younger than the entire adult population of the province. In addition, the sample is also influenced in this regard by not including high school drop-outs, who tend to come from lower socio-economic backgrounds.

It is also important to note that key measures of family socio-economic status – mother's education, father's education, father's occupation – vary systematically by community size. That is, communities with less than 10,000 residents have proportionally

fewer university-educated parents or fathers in professional/managerial jobs, compared with larger urban centres. Consequently, it may be necessary in subsequent analyses to try to distinguish the effects of family background from those of community size.

Respondents' personal well-being

The survey also briefly examined the self-reported personal well-being of these grade 12 students (Table 4). Overall, these teenagers say they are happy (96% answered either "very" or "somewhat happy") and hopeful (87% either "very" or "somewhat hopeful"). That roughly half of these young people reported being only "somewhat" happy or "somewhat" hopeful may invite a less positive interpretation. But note that few respondents stated that they were "not very happy" (4%) or "not very hopeful" (13%), even though they could choose these response categories.

The vast majority (93%) of respondents stated that they were either "very" or "somewhat healthy." Yet the lives of these grade 12 students, by their own reports, seem to be fairly stressful. In fact, less than one-third reported that they have little or no stress. In future analyses, we plan to further probe this finding. For now, we note that perhaps some of this stress is due to the fact that the survey was conducted just prior to final exams in what for most respondents was their last year of high school.

We also documented two key dimensions of well-being for teenagers: self-esteem and social support networks. On average, respondents reported positive self-esteem. For example, 73 percent felt satisfied with themselves, and over 80 percent felt that they have a number of good qualities and are able to do things as well as most other people. Only one-quarter reported sometimes thinking that they are no good, or feeling useless. And very few (6%) were inclined to feel that they are a failure. Social support appeared to be widely available from friends and parents (particularly mothers), and somewhat less so from other family members.

TABLE 4
Personal Well-Being Profile of Alberta Grade 12 Students

Thinking about your life in general, how happy would you say you are with your life?	
Very happy:	49%
Somewhat happy:	47%
Not very happy:	4%

In the past few months, how hopeful have you felt about your job and career prospects?	
Very hopeful:	33%
Somewhat hopeful:	54%
Not very hopeful:	13%

In the past few months, how healthy have you felt physically?	
Very healthy:	52%
Somewhat healthy:	41%
Not very healthy:	7%

Would you describe your life as:	
Very stressful:	14%
Fairly stressful:	55%
Not very stressful:	27%
Not at all stressful:	4%

	Disagree	*Neutral*	*Agree*[1]
On the whole, I am satisfied with myself:	8%	19%	73%
I feel that I have a number of good qualities:	2%	13%	85%
I am able to do things as well as most other people:	3%	14%	83%
At times I think I am no good at all:	51%	24%	25%
I certainly feel useless at times:	49%	26%	25%
All in all, I am inclined to feel that I am a failure:	80%	14%	6%

When you have problems, how much can you rely on:	*Very much*	*Some-what*	*A little*	*Not at all*[2]
Friends:	47%	35%	14%	4%
Mother:	45%	28%	19%	8%
Father:	29%	26%	6%	19%
Others in family:	22%	29%	29%	20%

[1] Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree"; values of 1 and 2 are combined into "disagree" while values of 4 and 5 are combined into "agree."
[2] The "not at all" category includes those who answered that they "don't have such a person."

4. Educational Status, Achievement, Preferences and Plans

Level of educational achievement

We now turn to our respondents' educational activities and achievements during their grade 12 year. The large majority (73%) of these 1996 grade 12 students were in academic programs (Table 5). As expected, enrollment in academic programs is more likely for students from higher socio-economic backgrounds, as measured by father's occupation and mother's education. Nearly nine out of every ten students surveyed (88%) indicated that they expected to complete at least 100 credits by the end of the school year (Table 6). This figure is almost identical to the percentage reporting they would obtain a high school diploma if they passed their courses. In other words, 13 percent of these grade 12 students were not finishing high school this year, and (to anticipate our discussion of Table 9) even more (16%) planned to return to high school in the fall.

Just under one-quarter of sample members (23%) had participated in work-experience programs in the past year, with a slightly higher percentage of females (26%) than males (20%) taking part in these programs (Table 5). The most common program, mentioned by 14 percent of all respondents, was formal Work Experience courses (15, 25 or 35). Second most common, but only mentioned by 6% of all respondents, was workplace visits lasting one day or less. For those students who reported some work experience, an average of about 120 hours in total had been spent in these programs in the past school year. In general, work experience seems somewhat more prevalent among students in non-academic programs and who come from lower than average socio-economic backgrounds, as measured by mother's education.

In terms of educational achievement, 51 percent of all students had grades in the 65-79% range, 27 percent had grades lower than 64%, and 22 percent had grades greater than 80% (Table 6). Taking a closer look at students' grades according to their parents socio-economic background, a greater proportion of students (32%) whose fathers'

TABLE 5
Program of Study and School-Based Work Experience

Current Program of Study

Academic:	73%
International Baccalaureate:	6%
Vocational/Career & Technology:	4%
Integrated Occupational:	1%
Other (unspecified):	1%
General/Basic (volunteered):	6%
Combination (volunteered):	4%
Non-response:	5%

Percent in Academic Program (including International Baccalaureate) [1]

Father's job:		Mother's education:	
managerial/professional:	*89%*	*university graduate:*	*92%*
other skilled:	*83%*	*some post-secondary:*	*85-86%*
semi-skilled:	*79%*	*high school or less:*	*79-82%*
unskilled:	*76%*		

Female: 86% Male: 81%

Participated in work-experience program (any type) in past year: 23% [2]

Work Experience 15, 25, or 35:	14%
Workplace visit (one day or less):	6%
Co-operative education:	4%
School-based business:	3%
Registered apprenticeship:	2%
Other type of program:	2%

Work experience participation:

female:	*26%*
male:	*20%*
academic program:	*19%*
other program:	*42%*
Mother univ. grad.:	*13%*
Mother < univ. ed.:	*21-34%*

Average hours (past year) in work experience program: 119 hours

female: 109 hours
male: 131 hours
academic program: 120 hours
other program: 111 hours

[1] Non-response (5%) omitted in calculation of percentages in academic programs in this and subsequent tables.

[2] Respondents could answer "yes" to more than one type of work experience program, so total of six types adds to more than 23% .

TABLE 6
Educational Achievement and Experiences

High school credits if courses passed
< 100: 12%
100 - 109: 40%
110 - 119: 27%
120 + : 21%
Will obtain diploma if courses passed:
87%

Average grades in past school year
80% + : 22%
65 - 79%: 51%
50 - 64%: 26%
< 50%: 1%

Average grades in past school year 80% or higher
female: 25%
male: 18%

Average grades in past school year 80% or higher:
managerial/professional father: 32%
father in other occupations: 14-17%
mother university graduate: 37%
... some post-secondary: 22-27%
... high school or less: 13%-17%

Dropped out of high school for part of a year or more: 6%
managerial/professional father: 3%
other skilled or semi-skilled job: 5-6%
father in unskilled job: 13%

Average days skipped one or more classes in past month: 3.1 days
academic program: 2.9 days
other program: 4.0 days
female: 2.9 days
male: 3.4 days

My parent(s) encourage me to do well in school[1]
Disagree: 3%
Neutral: 8
Agree: 28%
Strongly Agree: 61%

Overall, I have enjoyed my time in high school [1]
Disagree: 10%
Neutral: 18%
Agree: 41%
Strongly Agree: 31%

[1] Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree"; values of 1 and 2 are combined.

occupations were classified as managerial or professional had grades of 80 percent or higher, compared with students whose fathers were working in other types of occupations (14-17%). Similarly, a larger percentage of students whose mothers had at least some post-secondary education were likely to have grades of 80 percent or higher.

Despite these socio-economic variations in program enrollment or achievement, the vast majority (89%) of all grade 12 students either agreed or strongly agreed that their parents encouraged them to do well in school. And over seven in ten agreed or strongly agreed that they enjoyed their time in high school. What's more, only 6 percent reported ever having dropped out of high school for part of a year or more. In sharp contrast, 66 percent reported having skipped classes at least once in the last month. However, only 25 percent reported skipping classes on 5 or more days.

Preferences and plans for further education

Students were asked a number of questions regarding their values and beliefs about post-secondary education. Most students in the sample seemed to highly value a post-secondary education. For example, 93 percent of all respondents agreed that people today require higher levels of education than they did in the past (Table 7). Furthermore, 86 percent agreed that continuing their education would get them a good job, although this attitude was somewhat more pronounced for students in academic (87%) compared to those in other types of programs (79%). Similarly, only 10 percent of respondents felt that for the type of job they would be likely to get, they would not need much education.

When reflecting on their future plans, half (49%) of all sample members felt that they would have to go back to school more than once in their lifetime. Thus, in terms of continued participation in formal education, only half of today's high school seniors appear to accept the idea of "life-long learning" which is actively promoted by educators and business leaders – a finding with direct implications for high school counsellors and

TABLE 7
Post-Secondary Educational Values and Beliefs by Gender, High School Program, Father's Occupation and Size of Community

	Percent agreeing[1]										
				Other	Father's occupation		Size of community (1000s)				
	Female	Male	Acad.	Program	Man/Prof.	Other	> 500	< 100	< 10	< 2.5	TOTAL
These days, people require higher levels of education than they did in the past	94	92	93	91	93	93	93	93	92	91	93
I expect to go back to school more than once in my lifetime	51	47	49	50	49	48	50	51	47	46	49
Continuing my education will get me a good job	88 *	84	87 *	79	89 *	83	87	85	84	82	86
For the sort of job I'm likely to get I don't really need much education	6 *	12	8 *	17	6 *	12	8	11	11	9	10
Post-secondary education is getting too expensive for people like me	66	63	64	65	56 *	69	63	65	65	64	64
I will have to move away from home if I want to continue my education	43	40	43	40	44	42	27	43 *	63	57	41

[1] Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree." Values of 4 and 5 are combined into "percent agreeing." Statistically significant differences ($p < .01$) are identified with an asterisk (*).

teachers. This holds true regardless of gender, type of high school program, socio-economic background, or community size.

There is a fairly pervasive belief among sample members (64%) that post-secondary education is getting too expensive, no doubt a reaction to recent tuition increases at Alberta's post-secondary institutions. This view is less common among students whose fathers are professionals or managers, and therefore who are likely to be more economically advantaged. Furthermore, some four in ten expect to have to move away from home to continue their education. Community size influences this expectation, with respondents in smaller (less than 10,000) communities being significantly more likely to agree with this view.

With respect to beliefs about, and preferences for, different types of post-secondary education, there were some notable differences in how students perceived a university versus a trades or technical education (Table 8). Overall, about half (52%) agreed or strongly agreed that they need a university degree to get a good job. However, 58 percent also agreed or strongly agreed that programs in technical institutes lead to good jobs. But wording differences do not permit direct comparisons of responses to these two questions. Still, responses to both are influenced by a student's program in predictable ways. For instance, 58 percent of those in academic, versus 29 percent in other programs, specified that they would need a university degree to get a good job. Furthermore, agreement with this statement is also higher among respondents whose fathers are managers or professionals, and who live in larger urban centres of over 100,000.

Responses to a second pair of questions in Table 8 highlight more clearly the preferences for university versus a trades/technical education. Overall, 43 percent of respondents said they preferred a university education, versus 24 percent who preferred a trades or technical education. Students in academic programs (49%) were much more likely than those in other types of programs (21%) to prefer a university education. The

TABLE 8
University versus Trades/Technical Education: Beliefs, Preferences, and Parents' Influence by Gender, High School Program, Father's Occupation and Size of Community

	Percent agreeing[1]																
							Other		Father's occupation			Size of community (1000s)					
	Female		Male		Acad.		Program		Man/Prof		Other	> 500	< 100		< 10	< 2.5	TOTAL
Programs in technical institutions lead to good jobs	54	*	61		56	*	66		55		60	57	57		59	62	58
I need a university degree to get a good job	58	*	46		58	*	29		62	*	47	58	53	*	45	34	52
I prefer a university education compared to other kinds of post-secondary education	45		42		49	*	21		55	*	37	48	43	*	38	32	43
I prefer a trades or technical education compared to other kinds of post-secondary education	15	*	33		20	*	45		18	*	29	22	21	*	28	32	24
My parent(s) encourage me to get a university education	65	*	58		67	*	35		73	*	54	67	61	*	55	44	61
My parent(s) encourage me to get a trades or technical education	23	*	36		26	*	47		23	*	34	28	29		32	35	30

[1] Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree." Values of 4 and 5 are combined into "percent agreeing." Statistically significant differences ($p < .01$) are identified with an asterisk (*).

larger the size of the urban centre, the more likely students were to say they preferred and would need a university education. Male respondents (33%) outnumbered female respondents (15%) more than two-to-one with respect to preferences for a trades or technical education.

Preferences for one type of post-secondary education over another are shaped in the home, among other places (e.g., schools, the media). While 61 percent of respondents were encouraged by their parents to get a university education, only three in ten were encouraged to get a trades or technical education (Table 8). Variations by parents' socio-economic background in how sample members evaluated types of post-secondary education were also observed. For example, 55 percent of respondents with fathers in managerial or professional occupations stated that they preferred a university education, compared to 37 percent of students with fathers in other types of occupations. In addition, students in academic programs (67%) were much more likely to receive parental encouragement to go to university than were students in other types of programs (35%).

Further investigation of this issue shows that students' post-secondary preferences are influenced by the type of parental encouragement they receive, as well as their parents' socio-economic status (these results are not reported in the Tables). Three important findings in this regard are worth summarizing. First, students who preferred a university education had been encouraged to get such an education by their parents. Second, students who preferred a trades or technical education also had been influenced by their parents to obtain this type of education. Third, the encouragement to go to university appeared to have an even stronger impact on students' plans in families where parents themselves are university-educated.

Respondents were also asked to specify their more immediate educational plans for the upcoming school year (i.e., 1996-97). Most impressive in this regard is the finding that 63 percent of grade 12 students said they were planning to enter a post-secondary program (Table 9). Among these students going on to post-secondary education, 46

TABLE 9
Immediate Educational Plans

"Are you planning to continue your education in the fall?"

	Yes (post-secondary): 63%	Yes (high school): 16%	No: 21%
female:	65%	16%	19%
male:	61%	16%	23%
academic program:	66%	15%	19%
other programs:	52%	21%	27%
man./prof. father:	71%	13%	16%
other skilled job:	62%	15%	23%
semi/unskilled:	50-56%	20-22%	24-28%
mother univ. grad.:	76%	13%	11%
less education:	55-65%	14-19%	20-30%
city > 500,000:	66%	17%	17%
city < 100,000:	61%	21%	18%
< 10,000:	60%	12%	28%
< 2500:	64%	6%	30%

Plan to attend in Alberta: 90%

Plan to pay for education by: [1]
- Summer/part-time work: 65%
- Part-time work in school: 33%
- Student loans: 38%
- Scholarships/bursaries: 41%
- Help ($) from parents: 72%
- Other sources: 8%

Type of post-secondary education
- university: 46%
- technical school: 15%
- comm. college: 30%
- apprenticeship: 4%
- other: 5%

Average number of years of further education expected: 5.4

Returning to high school
- % in academic program: 78%
- % who will receive diploma if all courses passed: 53%
- average number of years of further education expected: 5.0

Not continuing education in fall
- plan to look for work soon: 58%
- have job arranged: 38%
- plan not to work for a while: 4%

Chances of being unemployed for several months after finishing high school
- not at all likely: 60%
- somewhat likely: 30%
- very likely: 10%

Average number of years of further education expected: 3.6

[1] Percentages total to more than 100% since respondents could answer "yes" to each source of income.

percent indicated they planned to enroll at a university, 30 percent at a community college, and 15 percent at a technical institute. In addition, 4 percent planned to begin an apprenticeship. Twenty-one percent of all respondents were not continuing their education in the immediate future, and 16 percent were going to return to high school.

Thus, these choices basically reflect the preferences for a university education noted above, particularly since some of the students planning to enter a community college may intend to transfer to a university. Considering only the post-secondary-bound students, nine out of ten expected to attend an Alberta institution (Table 9).

Once again, further analyses of these findings reveal that students in larger urban centres exhibited somewhat different plans, with a larger proportion planning to go to university (these results are not reported in the Tables). In addition, those whose fathers were in higher-status occupations were more likely to be going on to university. However, the combination of living in a large urban centre and coming from a more middle-class background (as measured by father's occupation) translated into an even higher probability of having plans to enter university after grade 12.

Turning to those students who expected to return to high school in the fall (16 percent of the total sample), it is interesting to note that 78 percent were in academic programs (Table 9). Furthermore, they expected to complete an additional 5.0 years of further education, on average, a figure not unlike that reported by the students heading directly into post-secondary institutions (5.4 years). So the students returning for an additional year of grade 12 may, in fact, be academically-inclined, perhaps seeing this extra year as a way of improving their marks, and thus their post-secondary admission chances. In contrast, those grade12 students who were not planning to go back to school only expected to obtain an average of 3.6 years of additional education.

What reasons did grade12 students give for their educational plans in the immediate future? Responses to the question *"Why have you decided to continue your*

education in the fall?" were grouped into six broader categories (Table 10). Virtually all of the reasons given were related to employment or education; only 9 percent of all reasons were personal ones with no bearing on jobs or school. Specifically, the most frequently cited reasons directly concerned jobs or careers (40%), such as improving one's job opportunities, to enter a specific occupation, or to get a job. The second most common set of reasons reflected needing or valuing an education (24%).

In contrast, for those students *not* planning to continue their education, approximately four out of every ten (38%) gave financial reasons, including needing to earn money for their education or being unable to afford further education (Table 11). A similar proportion said they needed a break or were undecided about their plans. It is noteworthy that, within both of these large response categories, there were specific reasons that revealed intentions to continue with education in the near future. Only a relatively small number of reasons (8%) conveyed negative comments about school, with students saying they were tired or bored of it, or that they didn't like school.

TABLE 10
Reasons For Educational Plans After Graduating [1]

"Why have you decided to continue your education (in the fall)?"

	Percent of all responses
Specific job or career reasons (e.g., improve job opportunities, enter an occupation, to get a job)	40
Need or value education (e.g., need an education to succeed, gain more knowledge, like school)	24
Financial reasons (e.g., earn a good income, economic independence, improve living standard)	10
To meet specific educational goals (e.g., finish high school, get a university degree, learn specific skills)	9
Reasons not related to school or jobs	9
Job quality (e.g., get a satisfying, secure, interesting job)	7
Total	100

Total number of responses = 3887
Total number of respondents = 2034

[1] This table reports the percentage of responses to the question. Up to 3 responses were coded.

TABLE 11
Reasons For Not Planning Further Education After Graduating [1]

"Why have you decided NOT to continue your education (in the fall)?"

	Percent of all responses
Financial reasons (e.g., need a job, to earn money for education, need money, can't afford education)	38
Need a break, undecided (e.g., will continue education in a year, want to take a year off, need time to decide, undecided)	37
Had enough (e.g., tired, bored or stressed of school, didn't like school)	8
Job or career-related reasons (e.g., education not helpful for what I want to do, already have a job, to get work experience)	6
Travel plans	5
Other reasons not related to school or jobs (e.g., to pursue other interests, get on with life)	3
Admissions issues (e.g., don't have requirements to go on)	3
Total	100

Total number of responses = 757
Total number of respondents = 469

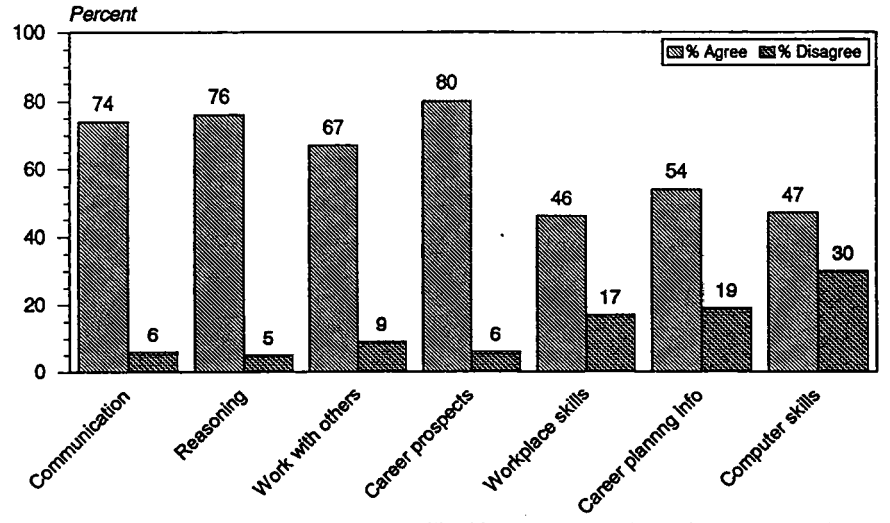
[1] This table reports the percentage of responses to the question. Up to 3 responses were coded.

5. Evaluating High School Education

Respondents' evaluations of skills acquired in high school

A series of questions addressed students' perceptions of specific skills they acquired in their high school education. A large majority of sample members felt that their communication skills (74%) and reasoning skills (76%), and their ability to work with others in groups (67%) had improved (Figure 1). It is interesting that these ratings are somewhat higher among females, compared with males (Table 12). Perhaps this reflects the fact that female students are more likely to be in academic programs. Table 12 also shows students in academic programs reporting greater improvements in communication and reasoning skills, compared with their non-academic counterparts.

Figure 1
Evaluating High School Education
(Self-reported Skill Acquisition)



Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree." Values of 1 and 2 are combined into "disagree", with values of 4 and 5 combined into "agree." See Table 11 for complete question wording.

TABLE 12
Evaluation of High School Education by Gender, High School Program, and Size of Community

Percent agreeing[1]

	Female		Male		Acad.		Other Program		Size of community (1000s) ≥ 500		< 100		< 10		< 2.5		TOTAL
Education has improved communication skills	78	*	74		77	*	69		76		71		77		80		74
Education has improved reasoning skills	78	*	75		78	*	71		77		73		76		80		76
Education has improved ability to work with others in groups	70	*	65		65		65		66		66		69		72		67
Education has improved career prospects	82	*	78		81		78		79		79		81		81		80
Education has provided skills needed to be successful in workplace	48		45		46		49		47		49		46		39		46
High school provided useful information on career planning	57	*	51		53		58		51		54		55		60		54
Education improved ability to use a computer	49		46		46		52		44		41	*	51		69		47

[1] Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree." Values of 4 and 5 are combined into "percent agreeing." Statistically significant differences ($p < .01$) are identified with an asterisk (*).

Less than half of grade 12 students (47%) felt that their ability to use a computer had improved, although there were variations here by size of community, with students from smaller urban centres being more positive about the development of their computer skills (Table 12). However, the less positive response to the computer ability question may be because some students might have already developed such abilities on their own. Still, it is important to note that 30 percent of respondents disagreed or strongly disagreed that their education had improved their ability to use a computer – the most negative evaluation of all the skills presented in Figure 1.

Generally speaking, whether or not students viewed all of these skills as relevant for future employment opportunities is open to speculation, as less than half of the sample (46%) felt that their education had provided skills which are needed for the workplace. It may be that students responded to this question with reference to their current employment experiences and expectations. Perhaps more salient, then, is the finding that four-fifths of sample members indicated that their high school education had generally improved their career prospects. In broad terms, this question likely taps students' beliefs in the value of formal education in Canadian society. Again, females gave more positive assessments of this aspect of their education (Table 12).

The two questions we have just discussed attempt to link education and employment, at least in the minds of grade 12 students. But so far, we have focused mainly on the educational achievements, plans and attitudes of Alberta youth. In order to more fully explore the connections between high school and employment, we now turn our attention to an analysis of respondents' work experiences and careers goals.

6. Work Experience and Plans

Paid and volunteer work experience in the last year of high school

Respondents were asked about their paid work experiences during the previous school year. In total, 72 percent indicated they had held a job, in which they worked on average 17.4 hours a week, earning approximately $113.00 per week (Table 13). One-quarter (26%) had worked ten or fewer hours per week, one-half (47%) had worked between 11 and 20 hours, and 27 percent had worked more than 20 hours per week. There were some differences by size of community, with students in mid-size urban centres being the most likely to have held a job, and to have worked slightly longer hours per week. Almost three-quarters (72%) of those students employed at the time of the survey were in unskilled or semi-skilled sales and service jobs.

Respondents also described their paid work experiences in the previous summer. Forty percent said they worked in part-time jobs, while less than one-third (28%) had worked full-time. Males were more likely to have worked full-time, and less likely to have been unemployed, than females. Once again, there were differences by size of community, with respondents in the smaller urban centres being more likely to be employed and working full-time. These differences likely reflect the more buoyant labour markets in some Alberta communities of this size.

Sample members were also asked about their voluntary work experience during the past school year. Just under half of the respondents (44%) indicated that they had volunteered, with females (50%) being more likely than males (40%) to volunteer (Table 14). This volunteering took place in a wide variety of school and community settings. Individuals from smaller communities, and those with fathers from the two highest occupational skill categories (managerial/ professional and other skilled) were somewhat more likely to have volunteered.

TABLE 13
Paid Work Experience by Community Size and Gender

Held job in past nine months: 72%
community size
> 500,000: 66%
< 100,000: 78%
< 10,000: 82%
< 2500: 65%

Currently hold job: 58%
community size
> 500,000: 54%
< 100,000: 62%
< 10,000: 69%
< 2500: 50%

Job for most of last summer by community size

	Total	*> 500,000*	*<100,000*	*<10,000*	*<2500*
Full-time:	28%	22%	23%	39%	46%
Part-time:	40%	36%	46%	42%	34%
No job:	32%	42%	31%	19%	20%

Type of job (current or earlier in school year)

	Total	*Female*	*Male*	*> 500,000*	*<100,000*	*<10,000*	*<2500*
Unskilled sales/service:	46%	47%	46%	47%	49%	46%	31%
Semi-sk. sales/service:	26%	35%	18%	26%	28%	24%	31%
Clerical:	5%	5%	5%	7%	4%	4%	1%
Prof./Man./Technical:	8%	8%	7%	9%	8%	7%	7%
Blue collar:	15%	4%	25%	11%	11%	19%	30%

	Female	*Male*
Full-time:	21%	35%
Part-time:	43%	37%
No job:	36%	28%

Type of Job
Unskilled sales/service: 40%
Semi-sk. sales/service: 20%
Clerical: 4%
Prof./Man./Technical: 8%
Blue collar: 28%

Average hours/week: 17.4 hours [1]
Female: 15.6
Male: 19.2
> 500,000: 16.8
< 100,000: 17.4
< 10,000: 18.6
< 2500: 17.2

Average (pre-deduction) earnings/week: $113 [2]
Female: $92
Male: $132
Academic: $110
Non-academic: $125
> 500,000: $109
< 100,000: $107
10,000: $123
< 2500: $119

[1] N = 1834; 13 students reporting work weeks in excess of 60 hours are excluded from calculation of the mean.
[2] N = 1786; 6 students reporting weekly incomes in excess of $1000 are excluded from calculation of the mean.

TABLE 14
Voluntary Work Experience

Participated in voluntary work in past nine months: 44%

Female: 50%
Male: 40%

Community size
> 500,000: 42%
< 100,000: 43%
< 10,000: 49%
< 2500: 50%

Father's occupation
Man./prof: 47%
Other skilled: 46%
Semi-skilled: 36%
Unskilled: 38%

Participated in voluntary work in past four weeks: 24%

Female: 27%
Male: 21%

Community size
> 500,000: 22%
< 100,000: 22%
< 10,000: 26%
< 2500: 30%

Father's occupation
Man./prof: 24%
Other skilled: 26%
Semi-skilled: 17%
Unskilled: 22%

Type of voluntary work (past nine months or past four weeks) [1]

	Total	Female	Male	Academic	Other program
School-related:	14%	17%	12%	16%	10%
Religious organization:	9%	8%	10%	8%	11%
Health-care:	11%	16%	6%	13%	3%
Sports-related:	15%	13%	17%	15%	15%
Fund-raising:	11%	10%	12%	11%	8%
Other community org'ns:	40%	36%	43%	37%	53%

[1] Based on 1133 respondents who described the voluntary work they had done in the past nine months or past four weeks. Since they were asked to describe their most recent volunteer work, the additional answers from the 148 students who described more than one kind of work are not included in this table.

Considering that almost three-quarters of students had acquired paid work experience, and that nearly half of the sample had volunteered during the past school year, it is clear that a sizable proportion of grade 12 students are investing their time in work-related activities outside of the classroom. Section 7 of this report focuses on the work-related skills students believed they had acquired in their paid and unpaid work, as well as in school.

Career goals

When asked about their occupational aspirations, sample members listed professional occupations more frequently than sales and service, clerical, and blue-collar occupations (Table 15). Those with parents in professional occupations were somewhat more likely to aspire to such jobs, as were grade 12 students in larger urban centres (these results are not shown in Table 15). In addition, aspirations varied by high school program type and gender. For example, students in academic programs were more likely to choose professional and semi-professional occupations, while students in other programs were somewhat more likely to choose semi-professional, skilled sales/service and skilled blue-collar occupations. Overall, very few individuals (3%) chose business or finance-related professional occupations or managerial occupations (4%). In the professional category, females more often chose health, social science and education-related occupations, while twice as many males (17%) as females (7%) chose natural and applied science occupations. As well, males, and particularly those in non-academic programs, were much more likely to aspire to skilled blue-collar occupations (17%).

Looking at some of the favourite occupational choices, this gender division is once again apparent. For example, "nurse," "social worker" and "teacher" were predominantly chosen by females. In contrast, "computer analyst/ programmer," "engineer" and "auto mechanic" were mainly chosen by male sample members. Thus, even though all male and

TABLE 15
Occupational Aspirations by Gender and High School Program

Occupational Category[1]	Female	Male	Academic	Other Program	Total
Professional					
Business/Finance	3	3	3	2	3
Natural/Applied Science	7	17	13	8	12
Health	13	5	11	2	9
Social Science/Education	21	8	16	6	14
Arts/Culture	5	5	4	6	5
Management	4	5	4	4	4
Tech. Science/Health	8	6	7	6	7
Paraprof. Soc. Sc./Arts/Culture	10	7	8	10	8
Clerical	2	<1	1	4	1
Skilled Sales/Service	5	6	5	9	6
Semi-skilled Sales/Service	3	2	2	3	3
Skilled blue-collar	1	12	5	17	7
Semi/unskilled blue collar	-	2	<1	2	1
Housewife[2]	<1	-	<1	-	<1
Self-employment	3	5	4	4	4
Different job attributes[3]	6	6	6	7	6
"Don't know"/Non-response	8	10	9	10	9
Total	100%	100%	100%	100%	100%

Favourites (number of times mentioned as career goal by female and male students)

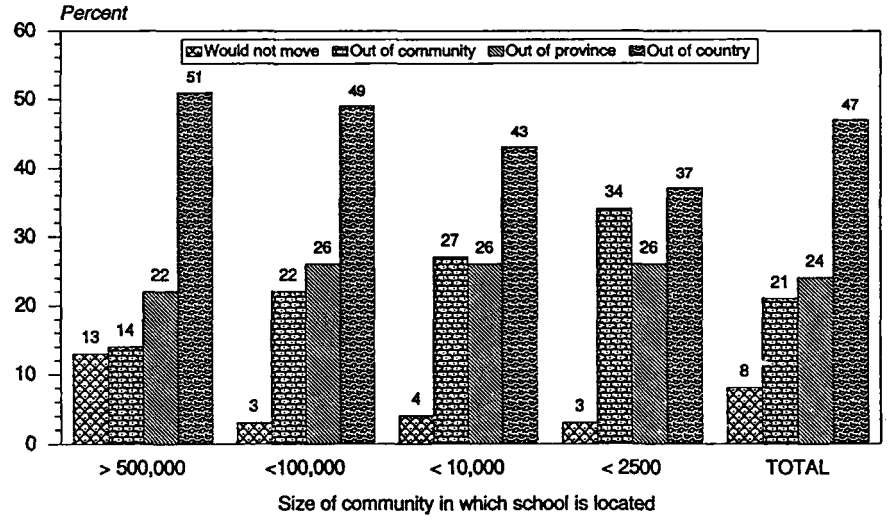
Nurse (23 female; 0 male)
Social worker/counselor (46 female; 1 male)
Teacher (119 female; 42 male)
Veterinarian (29 female; 5 male)
Psychologist (40 female; 10 male)
Biologist (28 female; 15 male)
Physician (63 female; 48 male)
Accountant (35 female; 29 male)
Lawyer (29 female; 27 male)
Forestry/conserv'n officer/tech'n (24 male; 14 female)
Musician (27 male; 14 female)
Retail store manage (29 male; 13 female)
Graphic designer (35 male; 20 female)
Police officer (54 male; 28 female)
Farmer (24 male; 7 female)
Computer analyst/programmer (57 male; 14 female)
Engineer (125 male; 26 female)
Auto mechanic/auto body (55 male; 2 female)

[1] All but the last four categories are constructed from more detailed National Occupational Classification (NOC) codes.
[2] Only six of the 1305 female respondents said they wanted to be a "housewife."
[3] About 40% of the 152 students in this category replied that they wanted a job that required skills of various kinds. Smaller proportions stated that they wanted to work with people, earn a lot of money, or simply find a job that was personally satisfying.

female students are being exposed to a wider array of occupational choices, and despite the fact that both female and male students have high educational aspirations (see Table 9), strong gendered patterns are still apparent in their career aspirations. In future analyses we intend to compare these 1996 results with earlier data from the 1985 Edmonton high school graduates survey described in Sections 1 and 2, above. This will help to determine the extent to which gender-specific occupational choices have changed in the past decade.

Students were also asked how far they would move to take a job (Figure 2). Overall, nearly half of the sample (47%) indicated they would be willing to move out of the country. About one-quarter (24%) said they would be willing to move to other provinces, while another 21 percent would only move out of their communities within the province to take a job. However, there were differences by size of community. Students from smaller urban centres were more likely to acknowledge willingness to move to other parts of the province (presumably to larger centres), but somewhat less likely to express a willingness to move out of the country. Overall, these findings point to a large degree of willingness to be mobile after graduation among Alberta high school seniors.

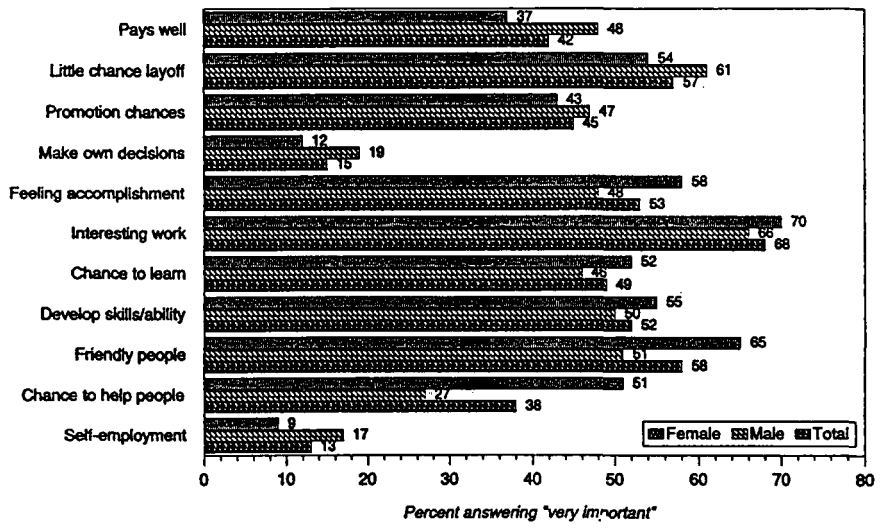
Figure 2
Willingness to Move to Take a Job *
by Size of Community



* Students were asked "After you have finished your education, how far would you move to take a job?" and were provided with four response choices.

In response to a series of further questions about work preferences, respondents evaluated a number of different features of work on a five-point scale ("not at all important" to "very important"). Responses of "very important" are shown in Figure 3. Overall, what appears to be most important to grade 12 students is work that is interesting, working with friendly people, work where there is little chance of being laid off, and work that provides a feeling of accomplishment. On the other hand, making your own decisions at work and being self-employed appear to be much less important to students. Figure 3 reveals gender differences for most items, with female sample members being much more likely than males to say that helping people, working with friendly people, and feeling accomplished are important to them. Males, on the other hand, were somewhat more interested in work that pays well, and work where there was little chance of being laid off.

Figure 3
Work Reward Preferences by Gender



Respondents were asked how important each of these factors would be, when looking for a full-time job after leaving school. They answered on a scale of "not at all important" (1) to (5) "very important." Responses of "very important" (5) are graphed above.

With respect to their work values and beliefs, grade 12 students appear to have fairly clear expectations about what their education should give them (Table 16). For example, three-quarters of the sample (74%) indicated that everyone has the right to the kind of job for which their education has prepared them, Moreover, two-thirds (64%) indicated that if someone has worked hard in school, they are entitled to a good job. These opinions on the appropriate returns to investments in education were more common among females and among students in academic programs.

But despite these high expectations, 65 percent of students agreed that it would be harder for people in their generation to live as comfortably as previous generations. It will be interesting to see in future analyses how this belief may influence students' sense of hopefulness or their stress levels (see Table 4). We should also point out that only one-third of the sample felt that they expect to change jobs many times in their career. This is especially noteworthy in light of current rhetoric suggesting that future generations of workers should expect frequent job changes. However, we should add the caveat that the wording of this question – notably the adjective "many" – perhaps elicits a more conservative response to this issue.

TABLE 16
Work Values and Beliefs by Gender, High School Program, Father's Occupation and Size of Community

Percent agreeing[1]

	Female		Male		Acad.		Other Program		Father's occupation: Man/Prof.		Father's occupation: Other		Size of community (1000s): > 500	Size of community (1000s): < 100		Size of community (1000s): < 10		Size of community (1000s): < 2.5	TOTAL
I'd do just about any kind of work if it was a steady job	27		29		26	*	35		22	*	31		27	28		30		32	28
If I could earn $20 an hour I would take any job	47	*	56		49	*	61		44	*	55		51	54		51		51	52
I would not mind being unemployed for a while	11		13		12		11		14		11		12	12	*	13		8	12
I'd rather collect welfare than work at a job I don't like	5	*	8		6		7		7		6		7	6		7		4	6
If someone worked hard in school they are entitled to a good job	68	*	61		66	*	55		66		63		68	62	*	58		62	64
Everyone has the right to the kind of job that their education and training has prepared them for	78	*	69		75		71		72		75		75	72		72		76	74
I expect to change jobs many times in my career	29		29		29		31		30		28		29	31		29		28	29
It will be harder for people in my generation to live as comfortably as previous generations	66		63		65		64		62		66		64	66		66		62	65

[1] Respondents answered on a scale of "strongly disagree" (1) to (5) "strongly agree." Values of 4 and 5 are combined into "percent agreeing." Statistically significant differences ($p < .01$) are identified with an asterisk (*).

7. Acquisition of Employability Skills in School and Work

Work-relevant skills acquired in high school courses, paid work, and volunteer work

A major innovation in this study is our attempt to measure the acquisition of job-related skills by grade 12 students. Our review of the research literature suggests that this issue has not been thoroughly examined. To remedy this gap, we asked all respondents the following open-ended question: *"What are the most useful job-related skills or knowledge you learned in high school?"* Similarly worded open-ended questions were also asked of any respondents who had participated in work experience programs, were currently employed, or were involved in volunteer work at the time of the study. It is important to note that we are reporting the perceptions of grade 12 students about the skills they had acquired. It is possible, indeed quite likely, that some students might not be aware of skills they had slowly acquired, or that some might not realize that certain skills had workplace relevance. Even so, their perceptions, whether completely accurate or not, can still provide us with useful information.

Recognizing that young people can receive job preparation in a diversity of settings, we were interested in comparing variations in the kinds of skills and knowledge students reported acquiring from different sources. To this end, we devised a common coding scheme based on a detailed analysis of written responses to all four questions about useful job-related skills or knowledge. Many respondents listed two or three kinds of skills or types of knowledge, resulting in thousands of discrete coding entries. Consequently, approximately eighty specific kinds of skill or knowledge were required in the coding scheme. These were then organized into the ten general categories, plus an "other" category, described in Table 17.

We note that these skill/knowledge categories contain the basic distinctions often made in discussions of "employability", such as analytical skills, basic academic skills,

TABLE 17
Comparison of Job-related Skills and Knowledge Learned in High School, Current Job, Work-experience Program, and Volunteer Work [1]

Job-Related Skill / Knowledge Category:	Learned in high school	Learned in current job	Learned in work experience program	Learned in volunteer work
	%	%	%	%
Education *(e.g., specific courses, more knowledge in an area, broader perspective, learn new things, preparation for post-secondary education)*	8	0	2	1
Analytic skills *(e.g., ability to reason, critical and analytical thinking, understanding issues, creativity)*	5	2	2	2
Basic academic skills *(e.g., speaking, numeracy, writing, reading)*	18	9	7	9
People skills *(e.g., social and interpersonal skills, helping others, team work and cooperation, conflict resolution)*	20	38	28	39
Job preparation *(e.g., what workplaces are like, job search skills, practical experience, how to work in a bureaucracy, what kind of jobs I enjoy)*	8	4	18	5
Business skills *(e.g., general business skills, handling cash, financial and accounting skills, supervisory skills)*	2	11	8	4
Technical, computer skills *(e.g., specific technical skills, computer skills, general technical knowledge)*	14	14	13	5
Work attitudes and behaviours *(e.g., discipline and hard work, personal development, time management, organizing and planning, initiative, responsibility, leadership, loyalty)*	20	22	18	23
Citizenship *(e.g., respect for others, value of community work, rights and obligations, exposure to diversity of people and viewpoints)*	1	1	2	9
None, few	2	2	3	4
Other	1	0	1	1
Total responses	100	100	100	100
response n	3817	2950	807	1519
respondent n	2165	1792	498	991

[1] This table reports the percentage of responses to each of 4 open-ended questions, asking respondents to describe the most useful job-related skills or knowledge learned in high school, work experience programs, current job, and volunteer work. Up to 3 responses were coded for each question.

people skills, business skills, technical and computer skills, and so on. To some extent, these categories reflect our own familiarity with the Conference Board of Canada's Employability Skills Profile and other similar typologies. However, to a greater extent, these categories were shaped by students' own responses to the open-ended questions.

What does Table 17 tell us about the kinds of job-relevant skills and knowledge grade 12 students report having acquired? First, survey respondents emphasized four broad categories of job-relevant skills and knowledge: people skills (such as social and interpersonal skills, helping others, team work, etc.), work attitudes and behaviour (such as personal development, discipline, hard work, etc.), basic academic skills (notably speaking, numeracy, writing and reading), and specific technical and computer skills. Equally important is the fact that education *per se* and analytic skills are viewed by relatively few respondents as useful for employment. This finding presents a challenge for educators, parents, and employers who all need to help high school students make this vital connection.

Second, Table 17 also documents some interesting patterns regarding the location of skill acquisition, as perceived by students. For example, high school is the most likely site for the development of analytic and basic academic skills (even though very few students see these skills as relevant to the workplace). People skills are more likely to be acquired in paid jobs or in volunteer work. Business skills (both general ones and specific skills such as handling cash or accounting skills) are mainly developed in jobs and in work experience programs. Paid jobs and volunteer work tend to contribute slightly more to developing interpersonal skills, compared with high school or work experience programs. In contrast, schools, jobs and work experience programs are equally important in developing technical and computer skills, as reported by these grade 12 students. Thus, even recognizing that students might not be aware of the full range of employability skills, Table 17 underscores the need for a broad, comprehensive perspective on such skills. No single source, particularly schools, can provide students with all that they need in this regard.

Table 17 raises as many questions as it answers, and invites further interpretation. Given the ambitious educational and career plans of many of these students and their positive attitudes about education, it seems odd that they would downplay the job-relevance of education generally or of analytic skills. Nevertheless, very few sample members mentioned such skills in response to our open-ended questions. Perhaps high school students see the value of secondary and post-secondary education mainly in terms of credentials, rather than skills. In addition, perhaps some respondents were answering these open-ended questions with reference to their immediate employment experiences, rather than their longer-term career plans. Table 17 also highlights the strong emphasis grade 12 students place on "people skills." This might reflect their assessment of the importance of social, interpersonal and other people skills in "student jobs." This finding could also be interpreted in the context of adolescent development and the intense concern most teenagers feel about interpersonal relations. Further analysis will explore some of these issues.

Table 18 focuses on computer literacy, widely acknowledged to be a crucial employability skill. More than nine out of ten students said they were able to use a computer for more than just playing games. There were no gender differences in this regard, but academic students were slightly more likely to be computer-literate compared with their non-academic counterparts. More importantly, students are far more likely to use computers at home and at school than in their jobs.

Word-processing was the most frequently-cited kind of computer use (Table 18). Approximately six in ten respondents had used a computer for word processing in the 12 months prior to the survey, either at school or home. In sharp contrast, only 6 percent had done word processing in their paid jobs. Data entry or record-keeping was the most likely computer use in the workplace, but even it was reported by only 10 percent of the total sample. Apparently, "student jobs" make little use of the computer skills of young workers, a finding that challenges employers to provide student workers with greater opportunity to use such skills.

TABLE 18
Computer Use at Home, School and Work

Can use a computer to do things other than playing games: 91%

Female: 91%
Male: 91%
Academic program: 92%
Other program: 86%

In past 12 months, have used a computer for:

	At Home	At School	At Work
Word processing:	63%	59%	6%
Data base/data entry/ record keeping:	27%	33%	10%
Spreadsheet/data analysis:	20%	36%	5%
Graphics/desk top publishing:	27%	29%	3%
Programming:	15%	22%	2%
Internet:	33%	25%	3%

Percent agreeing that education has improved their computer skills: 47%

If computer used at school in past 12 months for:

none of the purposes above: 19%
1 or 2 of these purposes: 43%
3 or 4 of these purposes: 68%
5 or 6 of these purposes: 80%

Earlier (in Table 12 and Figure 1) we noted that approximately half of the sample agreed that their education had improved their computer skills. We speculated that negative answers to this question might indicate that students had acquired computer skills elsewhere, rather than that schools were failing to teach such skills. However, Table 18 demonstrates that students using computers in schools were much more likely to say that these computer skills had improved as a result of their high school education.

Perceived employability skills gaps in high school education

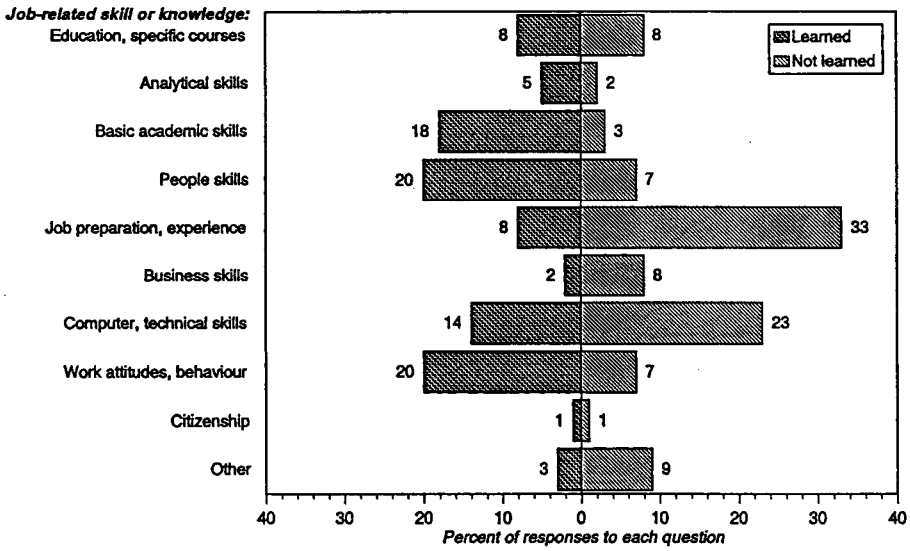
We also designed our study to document students' perceptions of any gaps in their job-related skills and knowledge. Again, very little is known about how teenagers define employability or what they think employers look for when hiring. To shed some light on these important issues, we asked respondents to describe any job-related skills or knowledge they expected to need but did not learn in high school. These open-ended replies were coded using the same categories described above.

A comparison of the job-related skills learned in high school with those that respondents feel they need but did not learn is presented in Figure 4 (the left-side bars repeat the findings from the "high school" column in Table 17). The graph reports the percentage distribution of responses to each of these questions, so we should remember that the left-side bars are based on more than twice the number of responses as the right-side bars (3817 versus 1,605). In other words, about twice as many students commented on skills they had learned in high school, compared to skills they had not learned.

Figure 4 shows that students are most likely to say that high school taught them people skills, work attitudes, and basic academic skills. But on the right side of the graph, two large gaps are evident: students are most likely to report that high school had not provided them with specific job preparation (such as knowledge of what workplaces are

like, job search skills, practical experience, and so on) and specific technical skills, especially computer-related skills. Whether or not schools should be emphasizing specific job skills or, providing more focused opportunities for work experience, remains an important educational policy question, even though these findings provide only a partial answer. What Figure 4 does demonstrate, however, are the concerns about insufficient skills and experience that young people take into the labour market.

Figure 4
Comparison of the Most Useful Job-related Skills or Knowledge Learned in High School With Those That Are Needed But Were Not Learned

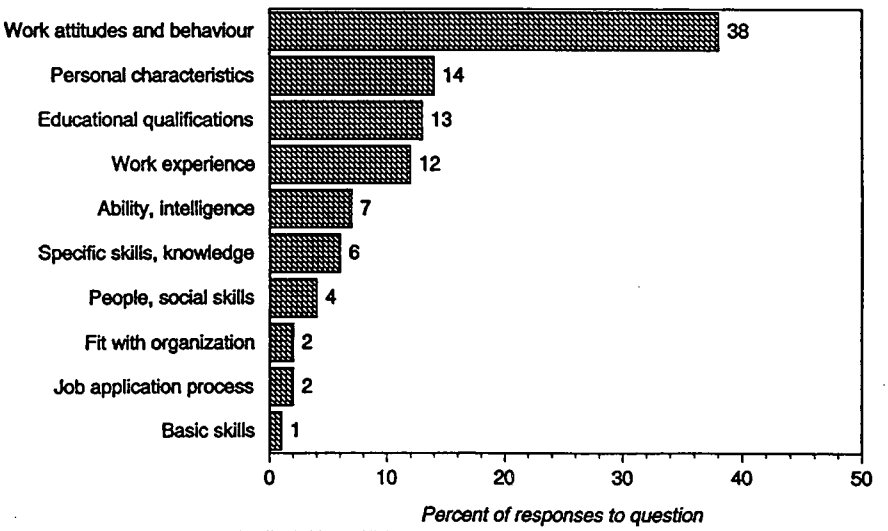


Note: Up to 3 responses were coded for each question. 2165 respondents answered the question on what was learned in high school, giving 3817 responses; 1099 respondents answered the question about what was not learned but is needed, giving 1605 responses. Reported here is the percent of responses.

Perceptions of what employers look for when hiring high school graduates

Finally, we also asked respondents to list what, in their opinion, were *"the three most important things employers look for when hiring a high school graduate?"* The contents of the open-ended responses were analyzed using the same methodology described above, and the results are presented in Figure 5. Once again, it is important to put these findings into perspective. Whether employers actually hire on this basis is not the point, since these are the perceptions of grade 12 students about what employers are seeking (even though other research suggests that some of these perceptions may be quite accurate). That said, students are most likely to believe that employers look for positive work attitudes and appropriate work behaviours (38% of all responses), followed by specific personal characteristics (14%), educational qualifications (13%), and work experience (12%).

Figure 5
The Most Important Things Employers Look For When Hiring a High School Graduate, Reported by General Category



Note: Respondents were asked to list 3 things. All three responses are combined in this graph. The 2,525 respondents to this question provided a total of 7,284 responses. Reported here is the percent of responses.

These perceptions are in line with some of the findings in Table 17, where we observed that appropriate work attitudes and behaviours were among the job-related skills students said they had acquired in various settings. However, students were even more likely to comment on the people skills they had acquired (Table 17). Yet, when asked about employers' hiring preferences, very few students mentioned that people skills were a major asset for job applicants (Figure 5). Furthermore, when asked about job-related skills they had not learned in high school, students tended to focus on job-specific skills and experiences (Figure 4), even though relatively few believed that employers were looking for such skills (Figure 5).

What are we to make of these apparently contradictory findings? It appears as if grade 12 students are leaving high school with a less than coherent set of beliefs about their own employability skills, the skills employers are seeking, and the role of high schools in providing such skills. The complex and sometimes contradictory nature of young people's beliefs in this regard may simply reflect the lack of consensus on issues of employability in society as a whole. If anything, our findings underscore the need for further research (focus groups would be useful, as would more detailed analysis of these data) and public debate so that we can more fully understand what employability skills are required by high school students, and the role of the schools in providing these skills.

8. Conclusions

This study of 1996 Alberta grade 12 students' school and work experiences, attitudes, plans, and evaluations offers a wide range of important implications for educational policy. While we fully expect that educators and policy-makers will draw their own conclusions, we would like to end with a few observations about what we see as the policy relevance of some of the study's main findings. Given that this survey is the first phase of a longitudinal study of school-work transitions in the 1990s, we recognize that conclusions derived from this first report will require further assessment over time.

Essentially, this study has begun to illuminate two sets of complex linkages: connections between secondary and post-secondary education, and between education and employment. This dual focus raises a central policy question: What are the key supports and barriers to students achieving their educational and career goals? A better understanding of this issue is needed to assess the benefits of public investment in the educational system and the efficacy of educational reforms.

In many respects, the same contextual factors operate as both supports and barriers for students. This is especially clear in our analysis of the impact of demographic and socio-economic characteristics on educational attainment and plans, and on career expectations. Students from higher socio-economic status families are more likely to be in an academic high school program, have better grades, plan to attend university, and have higher career aspirations. It is also relevant to note that, quite independent of socio-economic background, community size influences students' educational and career plans. Students resident in Alberta's two large cities are more likely to value a university education, plan to obtain one, and aim for managerial or professional careers.

Furthermore, traditional gender differences are also shaping the experiences and plans of today's high school students. Consistent with previous research, female students have higher academic achievement than their male counterparts, and are equally likely to

plan to continue their education. Yet this equality does not translate into similar career plans; young women still tend to prefer traditional female careers while many male students are also quite traditional in their aspirations. To what extent this reflects the influence of families, schools, the media, and the larger community is an important question this study is unable to answer. But our findings do underscore the need for educators to seek more effective means of helping all students, both female and male, to seriously consider a greater range of career opportunities.

Attitudes can also facilitate or inhibit the achievement of goals, although it is important to account for how institutions shape these attitudes. In this regard, a key finding is that this generation of high school graduates still strongly values higher education. This "educational ethic" is variously expressed: 63 percent of all respondents plan to enter a post-secondary program in the fall of 1996, while students intending to return for another year of high school are likely trying to increase their chances of attending a post-secondary institution.

While these positive attitudes about education in general support the achievement of educational goals beyond high school, other more specific attitudes identify potential barriers. For example, only half of the grade 12 students surveyed expect to return to school more than once in their life. This expectation seems inconsistent with the current emphasis on "life-long learning." On a related point, surprisingly few respondents expect to change jobs many times in their careers, another reputed hallmark of the "new economy." These findings raise for discussion the question of how schools, parents and employers can better prepare high school students for the work world of the 21st century.

Respondents also perceived cost to be a potential barrier to achieving educational goals, given that two-thirds view post-secondary education as becoming too expensive. Again, this opens up a discussion of how educational funding policy can best maintain the principle of accessibility. The fact that two-thirds believe that they will not achieve the

same living standards as previous generations may provide a clue as to why education is so highly valued, even in the face of rising costs.

Indeed, another educational value that comes across strongly in this survey is the priority given to university as the post-secondary destination of choice. Even if costs were to drop substantially, there likely would not be room for all the 1996 Alberta grade 12 students planning to attend university. Should students be encouraged to entertain a wider range of post-secondary options? If so, how? In addressing these questions, educators and policy makers need to be reminded that relatively few grade 12 students see a trades or technical education as a good option, despite the fact that current occupational projections for the province forecast a need for skilled trades and technical workers.

With respect to work experience in the past school year, this survey reveals that 72 percent of respondents had held a job, 44 percent had done volunteer work, and 23 percent had participated in work experience programs through their school. In short, these 1996 grade 12 students already have considerable work experience. A unique contribution of this study is its documentation of students' perceptions of job-relevant skills they acquired from this work experience, in addition to that gained in high school courses. Because this is the first study to probe skill acquisition in this way, we caution against reading too much into results that, more than anything, raise as many questions as they answer. But among the interesting findings, it is striking just how little emphasis grade 12 students place on core academic skills and knowledge when asked to assess the job-relevance of their education. At the same time, these students obviously value educational credentials *per se* as a means of getting ahead in society and achieving their personal goals.

Perhaps lacking in high school education, then, are ways to help students see the explicit connections between their basic academic training, on one hand, and on the other hand, specific job skills. But this would also require students to look beyond their current part-time jobs when thinking about employment. It would be unrealistic to expect the

schools alone to promote a more comprehensive understanding of the work-relevance of education. It is telling that, despite having acquired considerable employability skills in certain areas – such as analytical thinking or computer literacy – students' jobs tend to underutilize these skills. So employers too can play a positive role by offering students more challenging tasks to perform, thereby allowing them to experience how higher-order academic and technical learning apply in the world of work.

Appendix 1:

1996 Alberta High School Graduate Questionnaire